

**AMENDMENTS TO THE CLAIMS**

1           1.       (currently amended) A continuous renal replacement therapy device adapted to be  
2 worn on a portion of the body of a patient, comprising:  
3                   at least one dialyzer that utilizes a ~~plurality of dialyzers that utilize~~ dialysate to  
4 remove impurities from the blood of the patient; and  
5                   a microprocessor adapted to control a rate that excess fluid is removed from said  
6 dialysate while said at least one dialyzer is utilizing the dialyzer to remove impurities from the  
7 blood; and  
8                   at least one sorbent device for regenerating the dialysate.

1           2.       (currently amended) The continuous renal replacement therapy device of claim 1,  
2 wherein the at least one dialyzer is ~~plurality of dialyzers are~~ connected in series.

1           3.       (currently amended) The continuous renal replacement therapy device of claim 1,  
2 wherein at least one of the dialyzers comprises ~~the dialyzers comprise~~ a plurality of cylindrical  
3 hollow fibers, wherein the patient's blood is circulated within the hollow fibers in a first  
4 direction and wherein the dialysate is circulated around at least a portion of the exterior walls of  
5 the hollow fibers in a second direction.

1           4.       (original) The continuous renal replacement therapy device of claim 3, wherein  
2 the exterior walls of the hollow fibers are semiporous so that impurities can be moved from the  
3 blood and into the dialysate.

1           5.       (currently amended) The continuous renal replacement therapy device of claim 1,  
2 wherein each of the at least one dialyzers have plurality of dialyzers has a flexible casing  
3 adapted to conform to the body contour of the patient.

1           6.       (currently amended) The continuous renal replacement therapy device of claim 1,  
2 wherein the number of dialyzers in the at least one dialyzer ~~plurality of dialyzers~~ may be varied  
3 to reflect different dialysis prescriptions

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1           7.       (currently amended) The continuous renal replacement therapy device of claim 1,  
2 further including a blood inlet tube leading into a first dialyzer of the at least one dialyzer series  
3 ~~of dialyzers~~ and a blood outlet tube leading out of a last dialyzer of said at least one dialyzer  
4 such that the at least one dialyzers are connected in series. ~~in the series of dialyzers.~~

1           8.       (original) The continuous renal replacement therapy device of claim 7, wherein  
2 the blood inlet tube includes a side port for the infusion of anticoagulants into the blood.

1           9.       (original) The continuous renal replacement therapy device of claim 8, wherein  
2 the anticoagulant is chosen from the group consisting of: heparin, prostacyclin, low molecular  
3 weight heparin, hirudin and sodium citrate.

1           10.      (currently amended) The continuous renal replacement therapy device of claim 7,  
2 wherein the blood outlet tube includes a side port adapted for an infusion of at least one additive.  
3 ~~for the infusion of additives.~~

1           11.   (currently amended) The continuous renal replacement therapy device of claim  
2   10, wherein the at least one additive can be ~~additives are~~ pumped into the blood ~~by~~ ~~from~~ a  
3   plurality of additive pumps.

1           12.   (currently amended) The continuous renal replacement therapy device of claim  
2   11, wherein the rate of infusion of said at least one additive ~~each additive~~ is controlled  
3   electronically.

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1           13.   (currently amended) The continuous renal replacement therapy device of claim  
2   10, wherein said at least one additive is ~~the additives~~ are chosen from the group consisting of:  
3   sodium citrate, calcium, potassium and sodium bicarbonate.

1           14.   (currently amended) The continuous renal replacement therapy device of claim 1,  
2   wherein the at least one sorbent device comprises ~~is~~ a plurality of sorbent devices connected in  
3   series.

1           15.   (currently amended) The continuous renal replacement therapy device of claim 1,  
2   wherein the at least one sorbent device comprises ~~is~~ a plurality of sorbent devices connected in  
3   parallel.

1           16.   (currently amended) The continuous renal replacement therapy device of claim 1,  
2   wherein the at least one dialyzer ~~plurality of dialyzers~~ are connected in parallel.

1           17.     (currently amended) The continuous renal replacement therapy device of claim 1,  
2     wherein at least one of said at least one dialyzer comprises the dialyzers comprise a plurality of  
3     parallel sheets of semiporous material, wherein the patient's blood is circulated on one side of  
4     the parallel sheets in a first direction and wherein the dialysate is circulated on the other side of  
5     the parallel sheets in a second direction.

1           18.     (currently amended) A continuous renal replacement therapy device adapted to be  
2     worn on a portion of the body of a patient, comprising:

3                     at least one dialyzer that utilizes dialysate to remove impurities from the blood of  
4     the patient; and

5                     a microprocessor adapted to control a rate that excess fluid is removed from  
6     dialysate while said at least one dialyzer is utilizing the dialysate to remove impurities from the  
7     blood; and

8                     a plurality of sorbent devices for regenerating the dialysate wherein a first sorbent  
9     device contains a first sorbent and a second sorbent device that contains a second sorbent; said  
10    first sorbent and said second sorbent being different compounds.

1           19.     (currently amended) The continuous renal replacement therapy device of claim  
2     18, wherein the plurality of sorbent devices are connected at least in series.

1           20.     (original) The continuous renal replacement therapy device of claim 18, wherein  
2     each of the sorbent devices has a flexible casing adapted to conform to the body contour of the  
3     patient.

1           21.   (original) The continuous renal replacement therapy device of claim 18, wherein  
2   the number of sorbent devices may be varied to reflect different dialysis prescriptions.

1           22.   (original) The continuous renal replacement therapy device of claim 18, further  
2   including a regenerated dialysate inlet tube leading into the at least one dialyzer and a spent  
3   dialysate outlet tube leading out of the at least one dialyzer.

a ( 1           23.   (currently amended) The continuous renal replacement therapy device of claim  
2   22, wherein the regenerated dialysate inlet tube includes a side port for an infusion of at least one  
3   additive~~the infusion of additives~~.

1           24.   (currently amended) The continuous renal replacement therapy device of claim  
2   23, wherein the at least one additive is ~~additives are~~ pumped into the dialysate from a plurality of  
3   additive reservoirs.

1           25.   (currently amended) The continuous renal replacement therapy device of claim  
2   24, wherein the ~~wherein the~~ rate of infusion of each one of the at least one additive is controlled  
3   electronically.

1           26.   (currently amended) The continuous renal replacement therapy device of claim  
2   23, wherein the at least one additive is ~~additives are~~ chosen from the group consisting of: sodium  
3   citrate, calcium, potassium and sodium bicarbonate.

1           27.   (original) The continuous renal replacement therapy device of claim 22, wherein  
2   the spent dialysate tube leads into the plurality of sorbent devices and the regenerated dialysate  
3   tube leads out of the plurality of sorbent devices.

1           28.   (currently amended) The continuous renal replacement therapy device of claim  
2   19, wherein the series of sorbent devices comprises ~~is-a~~ series of replaceable cartridges.

1           29.   (currently amended) The continuous renal replacement therapy device of claim  
2   28, wherein the replaceable cartridges include at least one of: activated charcoal, urease,  
3   zirconium phosphate, hydrous zirconium oxide and activated carbon.

1           30.   (currently amended) The continuous renal replacement therapy device of claim  
2   18, wherein the at least one sorbent device comprises ~~is-a~~ plurality of sorbent devices connected  
3   in parallel.

1           31.   (currently amended) The continuous renal replacement therapy device of claim  
2   18, wherein the at least one dialyzer comprises ~~is-a~~ plurality of dialyzers connected in parallel.

1           32.   (currently amended) The continuous renal replacement therapy device of claim  
2   18, wherein the at least one dialyzer comprises ~~is-a~~ plurality of dialyzers connected in series.

1           33.   (currently amended) The continuous renal replacement therapy device of claim  
2   32, wherein at least one of the at least one dialyzer comprises ~~the dialyzers comprise~~ a plurality  
3   of parallel sheets of semiporous material, wherein the patient's blood is circulated on one side of

- 4 the parallel sheets in a first direction and wherein the dialysate is circulated on the other side of
- 5 the parallel sheets in a second direction.
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